TEL'PUKHOVSKIY, V.B.; DMITRENKO, T.A.; ZELENIN, I.Ye.; KOSTYAKOVA, G.K.;
    RAKHMANIN, B.P.; BORISOV, Yu.S., otv. red.; KRUCHINA, N.Ye.,red.;
    FEDOROV, A.G., red.; LYUBUSHKINA, Ye., red.; YEGOROVA, I., tekhn.
    red.

[In the land of wide-open spaces and heroic deeds; youth in the
virgin lands] V kraiu prostorov i podvigov; molodezh na tseline.
Sbornik dokumentov. Moskva, Izd-vo TsK VLKSM "Molodaia gvardiia,"
1962. 278 p.   (MIRA 15:5)
                (Agricultural laborers)

FUNSHTEYN, Ya.N.; GOTLEYB, B.Ya.; ARUCHINA, S.K.

High-temperature natural-gas cementation. Avt.prom. 29 no.9:
41-42 S '63.
(MIRA 16:9)

1. Minskiy avtozavod.

(Cementation (Metallurgy))

KRUCHINA, V.

There is a great interest in Polish export goods.   Vnesh. torg.
43 no.9:11-12 '63.

(MIRA 16:10)

KRUCHINENKO, V. G.; PLATONOV, Yu. P.; CURNOV, V. B.;

"Electromechanical Device for Computing the Mean Moments of the Passage of
Stars During Observations," The International Association of Geodesy;
Abstracts of the Reports at the XI General Assembly of the International
Union of Geodesy and Geophysics, Moscow, Izd-vo AN SSSR, 1957, 63 p.

A Photoelectric amplifier makes it possible to measure the duration of two parts
of a contact (rectangular output signal) into which it is divided by a pulse from
a clock. Computing the moment of a star's passage is accomplished by a formula
given in the text. Observations could also be conducted of high magnitude stars
producing deformed edges of the contacts. Means of increasing the efficiency
of the device were also indicated.

Kruchin/ko A.G., + C.

33-4-10/19

AUTHOR: Kruchinenko, V. G., Platonov, Yu. P. and Sukhov, V. B.

TITLE: An electronic mechanical device for determining the mean moments of stellar transits during observations. (Elektronno-mekhanicheskoye vychislitel'noye ustroystvo dlya polucheniya srednikh momentov prokhozhdeniy zvezd vo vremya nablyudeniy)

PERIODICAL: Astronomicheskiy Zhurnal, 1957, Vol. 34, No.4, pp.609-612 (USSR)

ABSTRACT: In the astrometrical laboratory of the Pulkovo Observatory a device was designed and constructed which enables the evaluation of the mean moments of stellar transits during observations by averaging the moments of contacts of a photo-electric amplifier or a contact micrometer. To increase the efficiency of the scheme, an electro-mechanical calculator-printer was set up and this transmits the values of T given by Equation 1 either to a printing device or a hole puncher. The calculating block employs decatron trochotrons (type LP-4) allows the results of observations to be reduced more quickly.
There are 2 figures, no tables and no references.

SUBMITTED: December, 14, 1956.
Card 1/2

An electronic mechanical device for determining the mean moments 33-4-10/19
of stellar transits during observations.

ASSOCIATION: The Main Astronomical Observatory of the Academy
of Sciences of the USSR. (Glavnaya Astronomicheskaya
Observatoriya Akademii Nauk SSSR)

AVAILABLE: Library of Congress

Card 2/2

41296

S/035/62/000/010/055/128
A001/A101

AUTHOR: Benyukh, V.V, Gavlovskaya, A. A., Konopleva, V. P., Krivutsa, Yu.N.,
Kruchinenko, V. G., Sandakova, Ye. V., Terent'yeva, A. K.

TITLE: Photographic observations of meteors at the observatory of the
Kiyev University in 1957

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 62,
abstract 10A459 ("Sb. rabot po Mezhdunar. geofiz. godu. Kiyevsk.
un-t", 1961, no. 1, 3 - 15)

TEXT: Double photographic observations of meteors were conducted by means
of fixed four-camera (D=100 mm, F=250 mm) installations during all clear moon-
less nights of the second half of 1957. A shutter rotating at a speed of 1,400
rpm was mounted in front of the cameras at one of the points. 141 meteors were
photographed, of which 14 from two points. The results of processing 10 meteors
are presented in the article. The photographs were measured with a КИМ -3
(KIM-3) measuring machine. Five meteors were processed on a "Strela" computer,
the remaining ones - manually. Photographic photometry of the meteors was carried

Card 1/2

Photographic observations of meteors at the...

A/035/62/000/010/055/128
A001/A101

out by relating to diurnal stellar trails, and for some of them also by relating to images of artificial meteors. The tables yield the results of determining flight instants (with an accuracy of 2 - 29 min), coordinates of radiants, velocity and braking in the middle section of the visible trajectory, extra--atmospheric velocity, altitude of the start, maximum brightness and end of the visible trail. Stellar magnitudes, masses and corresponding densities of the atmosphere are given for individual points of the trajectory. There are 8 references.

[Abstracter's note: Complete translation]

P. Babadzhanov

Card 2/2

41273

S/035/62/000/010/019/128
A001/A101

AUTHORS: Kruchinenko, V. G., Moysya, R. I., Bayrachenko, I. V.

TITLE: Radar observations of meteor streams

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 41-42,.
abstract 10A307 ("Sb. rabot po Mezhdunar. geofiz. godu. Kiyevsk.
un-t", 1961, no. 1, 26 - 36)

TEXT: The Kiyev University conducted radar measurements of meteor numbers
on the 4-m wavelength from January 1, 1958, to December 1, 1959. 33, 670 meteors
were recorded during 6,490 hours of observations. Equipment characteristics are
as follows: emitter's pulse power, 80 kw; pulse duration, 8 μsec; frequency of
pulse repetition, 50 cps; receiver sensitivity, 10 μv. The nine-element antenna
of the "wave channel" type at a height of 7 m over the ground surface is orient-
ed in east-west direction. Reflected signals were photorecorded on a film whose
movement speed was 90 mm per hour. For each meteor were determined the time of
appearance, distance and duration of reflection τ. During the period of active
meteor streams, mass (m) distribution of meteoric bodies was obtained. The

Card 1/2

Radar observations of meteor streams

S/035/62/000/010/019/128
A001/A101

The relation $\tilde{\tau} = Am^{1.15}$ is assumed, where A is a function of meteor velocity v. The differential mass distribution of meteoric bodies is described by the relation: $N \sim m^{-s}$. The following dependence of meteor luminosity I on m, v and zenith distance of the radiant z_R is adopted: $I \sim mv^3 \cos z$, as well as the scale of

masses in which a $+2^m, 86$ meteor is originated by a meteoric body with m=1 g, v=10 km/sec and $z_R = 0$. A $+2^m_{\cdot}4$ meteor corresponds to duration $\tilde{\tau} = 1$ sec. In the

Gemini stream, parameter s varies systematically during the visibility of the stream. The values: 2.5; 2.2; 2.0; 1.7; 1.4 and 1.8 are obtained for the successive nights of December 9 - 15. For the Arietid stream, the average value of s = 2.23. In the Perseid stream of 1958 the s-value changes from 1.83 on August 6 - 8 to 1.65 on August 11 - 14. In the 1958 Orionid stream s = 1.80, and in the 1958 Quadrantid stream s = 1.72. There are 8 references..

V. Lebedinets

[Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AT4034464   S/3091/63/000/002/0040/0055

AUTHOR: Moysya, R. I.; Kruchinenko, V. G.; Bayrachenko, I. V.

TITLE: Influence of the directional diagram of an antenna on the observed mass distribution of meteors

SOURCE: Kiyev. Universitet. Sbornik rabot po Mezhdunarodnomu geofizicheskomu godu, no. 2, 1963, 40-55

TOPIC TAGS: astronomy, meteor astronomy, meteor, antenna directional diagram, meteor trail, meteor mass distribution

ABSTRACT: There are several methods for determining the exponents in the mass distribution law for meteors when using data from radar observations. One of the most common methods is based on the measured distribution of the duration of radio meteors. The derived theoretical expressions are correct only for the case of reception of signals from a narrow sector of the directional diagram. In a real case reception always is from the entire region of the diagram and the amplification factor of the antenna changes as a function of direction. In this article the authors attempt to take into account the influence of the antenna directional diagram in the vertical plane on the results of radar meteor observations. The article begins with a discussion of certain problems in the theory of scattering

Card 1/2

ACCESSION NR: AT4034464

of radio waves on meteor trails and the method for selecting the range of electron densities and masses; this entire section is based almost entirely on non-Soviet published sources. The authors present the derivation of the principal relations required for solution of the problem and discuss the method for processing data. Solution of the problem required the introduction of many simplifying assumptions. The problem is limited to the influence of the antenna directional diagram in the vertical plane; the similar problem for the horizontal plane will be considered in a separate article. A final expression is obtained for the integral law of mass distribution of the recorded meteors with the influence of the directional diagram taken into account. The problem also involved a comparison for different antennas differing from one another in the form and degree of directivity. It was found that the distribution of meteor bodies by mass differs when the influence of the directional diagram is taken into account from the distribution law actually ex- isting in space. The difference is particularly well-expressed in the region of small masses. The influence of the form of the directional diagram is relatively small; this influence also is expressed most clearly in the region of small masses. Orig. art. has: 60 formulas, 12 figures and 1 table.

ASSOCIATION: Kiyevskiy universitet (Kiev University)
SUBMITTED: 00
Card 2/2   SUB CODE: AA   DATE ACQ: 07May64
                                      NO REF SOV: 004   ENCL: 00
                                                              OTHER: 007

ACCESSION NR: AT4032228   8/3089/63/000/005/0293/0297

AUTHOR: Kruchinenko, V. G.; Moysya, R. I.; Bayrachenko, I. V.

TITLE: Determination of the true number of meteors using radar observation data

SOURCE: AN UkrSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Geofizika i astronomiya; informatsionnyy byulleten', no. 5, 1963, 293-297

TOPIC TAGS: meteor, meteor astronomy, astronomy, radar, antenna directional diagram, upper atmosphere, radio meteor

ABSTRACT: In processing the radar observations of meteor activity it is necessary to convert properly from the observed number of radar echoes to the true number of meteors for a certain sector of the sky. In this process it is necessary to take into account the influence of the three-dimensional form of the directional diagram of the radar antenna. In this paper the author cites the principal formulas used in connection with radar observations of meteors and derives a general expression for the integral distribution of meteor bodies by masses with allowance for the influence of the directional diagram. The necessary formulas are cited for conversion from the observed to the true number of radio meteors. On the basis of the cited formulas, and with certain simplifying assumptions, it

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ACCESSION NR: AT4032228

is possible to determine the total increment of the earth's mass during a year from the falling of meteor matter. The derived annual value is approximately 1,120 metric tons. Orig. art. has: 22 formulas and 1 figure.

ASSOCIATION: Astronomicheskaya observatoriya Kiyevskogo gosudarstvennogo universiteta (Astronomical Observatory, Kiev State University)
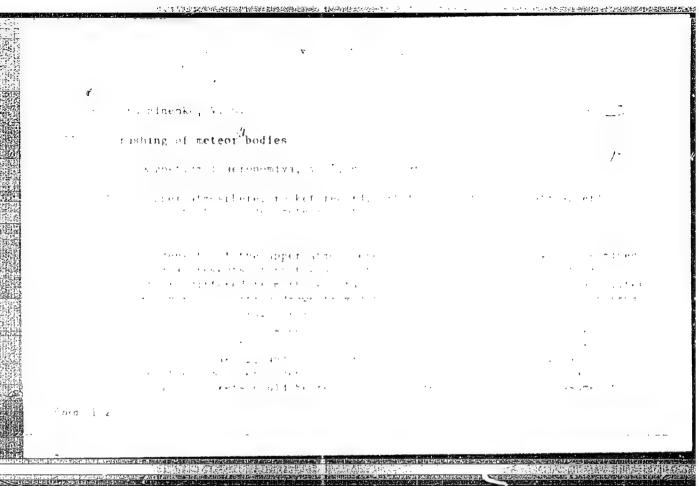
SUBMITTED: 00

SUB CODE: AA

DATE ACQ: 16Apr64

NO REF SOV: 006

ENCL: 00

OTHER: 001

Card 2/2

v

rushing of meteor bodies

ACCESSION NR   AP5005192   /

... of a porous structure or dust balls of very low density. These balls
... aerodynamic press re...
... small grains is suf...
... in a meteor trail. Numeri...
... are given in a tab...
... ... of meteors begins as soon ...   ... aerodynami...
...

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet, Astronomicheskaya observatoriya
... University, Astronomical observat...

SUBMITTED: 16Mar64   ENCL: 00   ...

NO REF SOV: 012   OTHER: 004   ATD PRESS: 3190

Card 2/2

KRUCHININ, A.F.

Forestry survey map of the U.S.S.R. on a 1:2,500,000 scale. Sbor.
st. po kart. no.9:69-71 '56.   (MIRA 10:8)
                (Forests and forestry--Maps)

KRUCHININ, A.F.

NIKOLAYEVSKAYA, Ye.M.

SOV/1779

3(2)   SOV/6-59-2-11/22
AUTHOR: Kruchinin, A. P.

TITLE: Regional Forest Maps (Regional'nyye karty lesov)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 2, pp 51-56 (USSR)

ABSTRACT: Previous forest maps of individual areas of the USSR were
                 schemes of low practical value. In recent years new forest maps
                 of some areas were drawn. In this connection it turned out to be
                 necessary to improve the method of compiling maps and to work
                 out them more in detail. At present, the following scales are
                 specified for regional forest maps: 1 : 200000 - 1 : 1000000;for
                 southern areas of the European part of the USSR 1 : 200000; for
                 Central Russia 1 : 300000 - 1 : 400000, for North Russia, Ural
                 and some southern areas of West Siberia 1 : 400000 - 1 : 500000,
                 for the northern area of West Siberia, the southern area of
                 East Siberia and the Far East 1 : 500000 - 1 : 750000. For
                 forest maps the same projection should be used as for topo-
                 graphical maps. Between the margin of the map and the border-
                 line of the area the following data must be entered: soil map,
                 table of wood resources arranged according to the various kinds
Card 1/3   of trees, register of "leskhoz" (forest industry establishments),

Regional Forest Maps   SOV/6-59-2-11/22

forester's districts, data on the volume of wood-cutting ac-
cording to kinds of trees. The following general geographical
data must be entered: continuously water-bearing rivers of a
length of more than 2 cm on the map scale, lakes and reservoirs
of more than 2 mm^2 on the map scale. From among irrigation
channels only the main channels should be entered. In parched
areas all lakes should be entered with data on the chemical com-
position of water, and the map should contain wells and other
artificial buildings. In scarcely populated areas all populated
spots, even single buildings, huts, log cabins, hunting-boxes,
etc must be listed. Furthermore, all forest roads and paths
must be registered in scarcely populated areas. All forest sec-
tions of more than 1 mm^2 on the map scale, burnt areas, clear-
ings of more than 4 mm^2 must be represented. In southern areas
where forests are scarce also woods of less than 4 ha are to be
marked by one tree sign. All State nurseries, irrespective of
their size, all protective wood zones, all valuable woods, all
remnant kinds of trees should be registered. Furthermore, the
maps should contain the administration offices of forest eco-

Card 2/3

Regional Forest Maps   SOV/6-59-2-11/22

nomic districts and forestry trusts, the offices of all
forestry districts, transfer points, etc as well as the wood-
processing industries, forest research stations and those
lumber runs which are used also after work has been finished.
On floatable rivers the spots where floating begins, the kind
of floating as well as the buildings, harbors, gratings for
floating logs, and transfer points should be listed. Also the
indices of wood resources (in cubic centimeters per 1 ha) must
be mentioned. The author describes the most useful method of
compiling the special distribution of details on the map devised
according to respective experience. There are 2 tables.

Card 3/3

KRUCHININ, A.M., mashinist

Improving the performance of recording manometers. Energetik
10 no.10:11 O '62.   (MIRA 15:12)
                    (Manometer)

KRUCHININ, A.M.

Overall redesigning of raw coal feeding systems. Energetik
11 no.1:8-9 Ja '63.   (MIRA 16:1)
                          (Boilers)

KRUCHININ, A.M., mashinist

Device for scraping surfaces. Energetik 12 no.2:15 F '64.
(MIRA 17:4)

Kiriban, A. M. Kurlyarise...

...gas flow in an electric arc furnace...of 1000 k...

KHTOROON, I.N., mladshiy leit...

...movement of a high-speed ga... .... Temp. Fiz. 4, 14-15
s, 1.6.   (MIRA 16:6)

L 09145-67   EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1)

ACC NR: AR6027497   SOURCE CODE: UR/0137/66/000/004/B020/B020

55

AUTHOR: Kruchinin, A. M.

TITLE: Dynamics of a closed system for automatic control of electric-arc DC instal-
lations used in heating an intense stream of gas   14

SOURCE: Ref. zh. Metallurgiya, Abs. 4B127

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 46, 1965, 45-49

TOPIC TAGS: automatic contr- *system stability*, electric arc, heating, *control system stability*

ABSTRACT: A three-layer chan. . model of the arc is used for studying the dynamics of
a closed automatic control system for regulating an electric-arc unit which heats a
twisted stream of gas on direct current with stationary turbulence in the channel.
This model may be used on an analog computer for simultaneous time solution of the
energy balance equation, the complete equation of the electrical circuit and the equa-
tion of motion with regard to nonstationary processes in the arc. Studies on the basis
of the proposed model showed that an automatic current stabilizer in combination with
a filter choke in the arc circuit provides stable arc combustion with delivery charac-
teristics and high quality stabilization of the electrical and thermodynamic heater
conditions even when there is no active resistance in the arc circuit. 3 illustra-
tions, bibliography of 11 titles. V. Pryanikova. [Translation of abstract]

SUB CODE: 09

Card 1/1 nat   UDC: 669.621.365.5:05.011.56

KRUPININ, D.; DMITRIYEV, V.

Preventing grain losses in bulk transportation. Avt. transp. 42
no.7:16-17 Jl '64.   (MIRA 17:11)

l. Stavropol'skoye avtoupravleniye.

1. KRUCHININ, I. ENG.

2. USSR (600)

4. Building, adobe

7. From, experiments with adobe. Sel'. stroi. 3 no. 3. 1947.

9. Monthly List of Russian Accessions. Library of Congress, March 1953. Unclassified.

KRUCHININ, I.A., inzh.

Efficiency of basic trends in the moderni..tion of machine tools. Vest. mashinostr. 44 no.5:71-75 My '64.

(MIRA 17:6)

KRUCHININ, I.A., Inzh.

Methodological features in determining the efficiency of
the modernization of equipment. Mekh. i avtom. proizv. 18
no.7:37-38 Jl '64.   (MIRA 17:9)

KRUCHININ, I.G.

Measuring moments of journal-type friction-testing machines.
Nauch.-tekh.inform.biul. LPI no.11:96-102 '58.

(MIRA 12:11)

(Friction--Testing) (Testing machines)

POLYAKOV, V.S.; KRUCHININ, I.G.

Relationship between the torque on roller bits and the axial load.
Neft. khoz. 39 no.9:7-12 S '61.   (MIRA 15:1)
(Turbodrills)

D'YAKOV, B.F.; IMASHEV, N.U.; KRUCHININ, K.V.; KOGAN, A.B.:
    KOZMODEM'YANSKIY, V.V.; TOKAREV, V.P.; TRIFONOV, N.K.
    CHEREPANOV, V.N.; VYALOVA, R.I.

    Southern Mangyshlak is a large new oil-bearing region. Geol.
    nefti i gaza 5 no.12:4-11 D '61.   (MIRA 14:11)

    1. Vsesoyuznyy nefteyanoy nauchno-issledovatel'skiy
    geologorazvedocheskoye upravleniye i trest Mangyshlakneftegazrazvedka.
            (Mangyshlak Peninsula—Oil fields)

SHVEDOV, G.V.; DIK...OV, A.I.; KRUCHININ, K.V.

Current state of the geological and geophysical study of
the Mangyshlak Peninsula in connection with its gas and oil
potentials. Trudy VNIGRI no.218:431-446 '63.
(MIRA 17:3)

KRUCHININ, K.V.

New data on Maikop sediments in the southern Mangyshlak
Peninsula. Trudy VNIGRI no.220. Geol. sbor. no.8:52-64
'63.   (MIRA 17:3)

VYALOVA, R.I.; D'YAKOV, B.F.; IMASHEV, N.U.; KOZ'MODEM'YANSKIY, V.V.;
    KRAYEV, P.I.; KRUCHININ, K.V.; TOKAREV, V.P.; TRIFONOV, N.K.;
    CHEREPANOV, N.N.

    Southern-Mangyshlak oil- and gas-bearing region. Trudy VNIGRI
    no.218:7-50 '63.   (MIRA 17:3)

KRUCHININ, K.V.

Geology and prospects for finding oil and gas in the Bekebash-
kudukskoye uplift of the Mangyshlak Peninsula. Trudy VNIGRI
no.186:286-306 '61.   (MIRA 15:3)
                (Mangyshlak Peninsula--Petroleum geology)
                (Mangyshlak Peninsula--Gas, Natural--Geology)

KLERYSHEV, P.A.; KOZLOV, Ye.G.; BELOZERTSEV, A.G.; VOLODARSKIY, D.Ya.;
    GRACHEV, V.A.; KRUCHININ, M.I.; FILDOMOV, K.N.; KHLUDENEV, A.I.;
    ANDREYEV, P.P.; NOVOZHILOV, V.P.; GERSHANOV, S.V.; PYLAYEVA, A.P.,
    red.; BALLOD, A.I., tekhn. red.; PEVZNER, V.I., tekhn. red.

[Economic efficiency of mechanization in agriculture] Ekonomi-
cheskaia effektivnost' mekhanizatsii sel'skogo khoziaistva. Mo-
skva, Izd-vo sel'khoz.lit-ry, zhurnalov i plakatov, 1961. 230 p.
                                            (MIRA 15:5)
1. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki
sel'skogo khozyaystva(for all except Pylayeva, Ballod, Pevzner).
                (Farm mechanization)

KRUCHININ, M.S., otv. za vypusk; VOROTNIKOVA, L.F., tekhn. red.

[Regulations for the factory repair of locomotives] Pravila za-
vodskogo remonta parovozov. Moskva, Vses. izdatel'sko-poligr.
ob"edinenie M-va putei soobshcheniia, 1962. 350 p.
(MIRA 15:5)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye lokomotivnogo
khozyaystva.
(Locomotives—Maintenance and repair)

MANCHENKO, V.P., inzh.; BELKIN, M.N., inzh. [deceased]; ZAV'YALOV,
G.N., inzh.; DZHAVOKHIN, T.V., inzh.; CHERYZHOV, B.P., inzh.;
MOLYARCHUK, V.S., kand. tekhn. nauk; KRUCHININ, M.S., inzh.;
AVDUKOV, M.I., inzh.; MEL'NIKOV, V.Ye., red.; MEDVEDEVA, M.A.,
tekhn. red.

[Manual for the locomotive engineer] Rukovodstvo parovoznomu
mashinistu. Izd.2., ispr. i dop. Pod obshchei red. V.S.
Moliarchuka. Moskva, Transzheldorizdat, 1963. 389 p.
(MIRA 16:12)
1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya.
(Locomotives--Handbooks, manuals, etc.)

KRUCHININ, M.S., inzh., otv. za vyp.; DROZDOVA, N.D., tekhn. red.

[Regulations for the maintenance and repair of locomotives
in depots. Superseding the regulations on the current repair,
maintenance and servicing of locomotives approved by the
Ministry of Railroad Transportation on March 8, 1957] Pravi-
la depovskogo remonta i soderzhaniia parovozov. V otmenu
Pravil tekushchego remonta, ukhoda i soderzhaniia parovozov,
utverzhdennykh MPS 8/III 1957. Moskva, Transzheldorizdat,
1963. 311 p.   (MIRA 16:12)

1. Russia (1923-   U.S.S.R.) Ministerstvo putey soobshcheniya.
    (Locomotives--Maintenance and repair)

KRUCHININ, N.D., tekhnik.

Improving the operation of single-process machines. Tekst.prom.
14 no.7:50 Jl '54.   (MIRA 7:8)

1. Nachal'nik tsekha fabriki im. Lukina.
   (Cotton machinery)

ACC NR: AP6013496   UR/0120/66/000/002/0066/0067

AUTHOR: Klebanov, Yu.D.; Kruchinin, S.P.; Lozina, L.A.

ORG: Institute of Atomic Energy GKAE, Moscow (Institut atomnoy energii GKAE)

TITLE: Differential gas Cerenkov counter

TOPIC TAGS: particle velocity counter, Cerenkov velocity counter, meson velocity indicator, bubble chamber, instrument, synchrotron.

ABSTRACT: This paper discusses the theory of operation, the construction and the results of tests of a differential type compressed gas Cerenkov counter, used for high energy particle velocity determination and counting. The counter was slated for work with a godoscopic system (reported previously by L.I. Govor and Yu.D. Klebanov at the Conference for high energy physics at Dubne in 1964) of a bubble chamber. The particle velocity β to be determined is related to the easily measureable angle of the Cerenkov radiation θ, and the adjustable refractive index of the environment, n (compressed freon-13), by the equation:

$$\cos\theta = 1/(\beta \cdot n) \quad (1)$$

Thus the angular resolution of the particle velocity becomes

$$d\theta/d\beta = 1/(\beta^2 \cdot n \cdot \sin\theta) = (\operatorname{Ctg}\theta)/\beta \quad (2)$$

and this improves with the decrease of θ. However, since the radiation intensity, I, decreases sharply with θ, I being proportional to $\sin\theta^2$, an optimum design angle of the Cerenkov radiation cone exists. This has been found to be $4°$. Constructional

Card 1/2   UDC: 539.1.074.4

ACC NR: AP6013496

details of the counter are given. Tests of the counter were conducted in the beam of π - mesons with an impulse p = 4 Gev/s on the 7 Gev synchrophazotrone of the ITEF. The meson beam passed thru a 3-scincillator telescope with a space angle of 2.10^{-3} rad. The counter showed its maximum effectiveness (96%) at a gas pressure of 3.7 am. Its resolving power for particle velocities was $d\beta/\beta = 2.10^{-3}$. Authors thank R.S. Shlyapnikov for his valuable discussions and interest in this project. Orig. art. has 2 figures and 3 formulas.

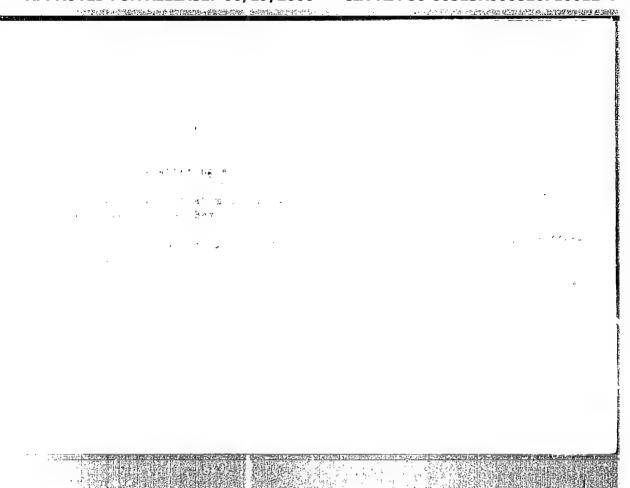SUB CODE: 18, 20   SUBM DATE: 28Jun65   ORIG REF: 004   OTH REF: 004
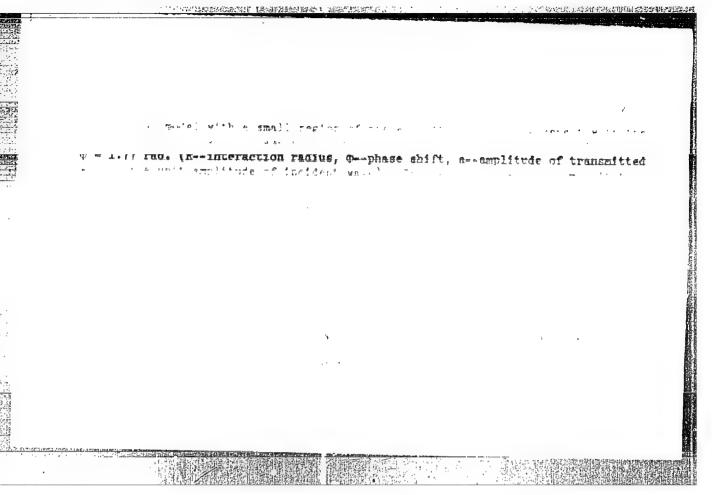
Card 2/2

... ..ol with a small region of ... .

$\Psi = 1.\pi$ rad. (R--interaction radius, Φ--phase shift, a--amplitude of transmitted ... ... amplitude of incident wa...)

L 25591-66   EWT(m)/T   IJP(c)

ACC NR: AT6001556

SOURCE CODE: UR/3136/65/000/900/0001/0011

AUTHOR: Klebanov, Yu. D.; Kruchinin, S. P.; Lozina, L. A.

3 √.

ORG: none

3 0

TITLE: Cherenkov differential gas counter

B+1

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-900, 1965. Differentsial'nyy gazovoy cherenkovskiy schetchik, I-II

TOPIC TAGS: radiation counter, hodoscope, bubble chamber, Cerenkov counter, Cerenkov radiation

ABSTRACT: The gaseous differential Cherenkov counter, developed at the Institute of Atomic Energy, is used for work with a hodoscopic device for a bubble chamber. Since the angle of Cherenkov radiation θ is related to the index of refraction of the medium n, and the particle velocity β, then the angular resolution is:

$$\frac{d\theta}{d\beta} = \frac{1}{\beta^2 n \sin \theta} = \frac{ctg \theta}{\beta} \qquad (2)$$

Thus the optimum angle of Cherenkov radiation θ must be selected due to the sharp drop in intensity which accompanies a decrease of the angle θ. The optimum angle in this case is $\theta \approx 4°$. The Cherenkov light was focused through a convex glass lens, 130 mm in
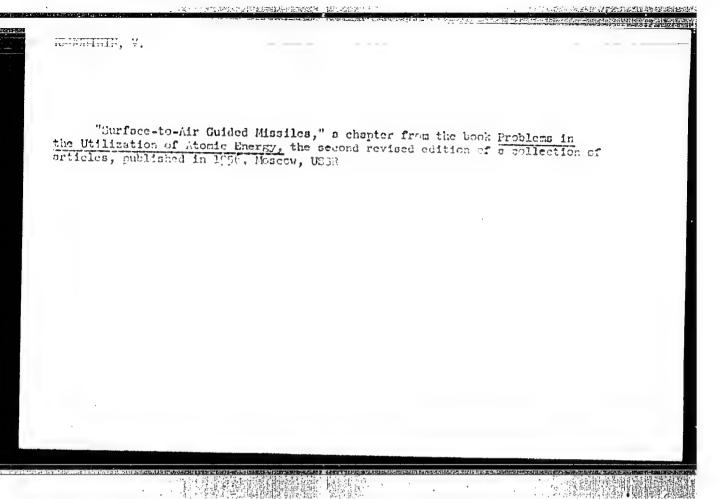
Card 1/2

L 25591-66

ACC NR: AT6001556

/

diameter. Focal length was $f = 250$ mm. Photons of Cherenkov radiation were regis-
tered by the FEU-36 photomultiplier. The counter was filled with freon -13. The
counter was tested in a Pi meson beam on the ITEF Cyclotron. The Pi meson beam
passed through a telescope from three scintillation counters measuring 50 x 50 mm^2.
The calculated maximum value of p ions with an impulse of $4\frac{Gev}{C} = 3.5$ atm. The width
of the curve at mid-height, $\Delta p = 2$ atm, corresponds to the resolution $\frac{\Delta\beta}{\beta} = 2.10^{-3}$.
The authors thank R. S. Shlyapnikov for his interest in the work and valuable dis-
cussions. Orig. art. has: 5 figures and 3 formulas.

SUB CODE: 18   /   SUBM DATE: 00/   ORIG REF: 004/   OTH REF: 004

Card 2/2 fV

KRAINIUK, V.

"Surface-to-Air Guided Missiles," a chapter from the book Problems in the Utilization of Atomic Energy, the second revised edition of a collection of articles, published in 1956. Moscow, USSR

KHUCHININ, V.

                "Antiaircraft Guided Missiles"   an article in the publication Problems of the Use of Atomic Energy. October, 1956, Moscow

SAGALAYEV, G.; KRUCHININ, V.

"Corrosion of chemical apparatus and corrosion-resistant materials."
I.IA. Klinov. Reviewed by G. Sagalaev, B. Kruchinin. Khim. prom.
no.3:190 Ap-My '56.   (MLRA 9:10)

1. Glavnyy mekhanik Ministerstva khimicheskoy promyshlennosti
(for Sagalayev) 2. Starshiy inzhener otdela glavnogo mekhanika
Ministerstva khimicheskoy promyshlennosti (for Kruchinin).
     (Corrosion and anticorrosives) (Klinov, I.IA.)
     (Chemical apparatus)

KRUCHININ, V.   Eng.Maj.

"Guided Anti-Aircraft Rockets," Krasnaya Zvezda. No.57, 3-8-56.

A summary of a similarly entitled article in the above paper, D 471947

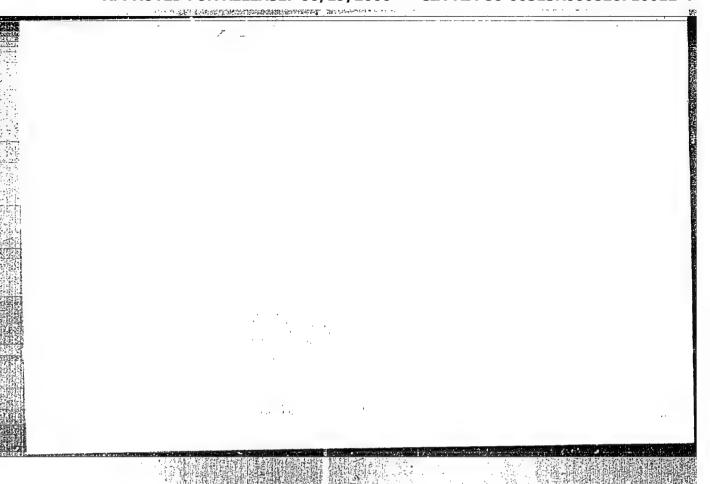Name   :   KRUCHININ, V.

Remarks: V. Kruchinin is the author of an article entitled
          "For the Very First Time. Testing the Extra-Long-
          Range Ballistic Rocket-- a New Success of Soviet
          Science and Technology"; this article demonstrates
          considerable knowledge of ballistic missiles.

Source : N: Krasnaya Zvezda, No. 208, 3 September 1957, p. 3,
              c. 1-6

PONOMAREV, A., general-polkovnik inzhenerno-tekhnicheskoy sluzhby;
FOKROVSKIY, G., prof., doktor tekhnicheskoy sluzhby;
KUVAL'DIN, A., dots., kand. tekhnicheskikh nauk inzhener-
polkovnik; MOSTOVENKO, V., dots., kand. tekhnicheskikh nauk
inzhener-polkovnik; GONCHAROV, M., polkovnik; TARANTSOV, A.,
polkovnik; VASIL'YEV, N., polkovnik; GORDEYEV, N., kapitan 1
ranga; KOZIN, K., kapitan 1 ranga; ARKHIPOV, M., dots., kand.
tekhn. nauk inzhener-podpolkovnik; SEDOV, A., dots., kand.
tekhn. nauk, inzhener-podpolkovnik; MELIK-PASHAYEV, N., dots.,
kand. tekhn.nauk, inzhener-podpolkovnik; TIKHOMIROV, Yu., dots.,
kand. tekhn. nauk, inzhener-podpolkovnik; PARFENOV, V., kand.
tekhn. nauk, inzhener-podpolkovnik; GEORGIYEV, A., inzh.-pod-
polkovnik; KRUCHININ, V., inzh.-podpolkovnik; MEKONOSHIN, N.,
inzh.-podpolkovnik; RYKOV, S., inzh.-podpolkovnik; SURIKOV, B.,
inzh.-podpolkovnik; ZHUKOV, V., inzh.-mayor; NOVIKOV, M., inzh.-
mayor; SUSHKOV, Yu., inzh.-kapitan; ASTASHENKOV, P.T., inzh.-
podpolkovnik; VASIL'YEV, A.A., red.; KARYAKINA, M.S., tekhn.
red.

[New advances in military technology for youthful readers]Mo-
lodezhi o novom v voennoi tekhnike. Moskva, Izd-vo DOSAAF,
1961. 342 p.   (MIRA 15:2)
 (Rockets (Ordnance)) (Atomic weapons)
      (Electronics in military engineering)

DENSHCHIKOV, M.T., red.; BULGAKOV, N.I., red.; VESELOV, I.Ya., red.
        VOVK, Ye.A., red.; GLAVINSKIY, D.G., red.; KRUCHININ, V.F.,
        red.; CHUKMASOVA, M.A., red.; BELIKOVA,L.S., red.;
SOKOLOVA, I.A., tekhn. red.

[Manual on malt and beer production]Spravochnik po proizvod-
stvu soloda i piva. Pod obshchei red. M.T.Denshchikova. Moskva,
Pishchepromizdat, 1962. 862.   (MIRA 15:11)
                (Brewing)

MAL'TSEV, Petr Mikhaylovich, prof., doktor tekhn. nauk;
ZHILOV, V.A., prof., retsenzent; KRUCHININ, V.F.,
inzh., retsenzent; KRUGLOVA, G.I., red.

[Technology of malt and beer; special course] Tekhno-
logiia soloda i piva; spetsial'nyi kurs. Moskva, Pi-
shchevaia promyshlennost', 1964. 858 p. (MIRA 18:1)

KRUCHININ, V.I.

SHVYRYAYEV, Grigoriy Konstantinovich; KLIMOV , I.Ya., redaktor;
KISELEV, V.S., redaktor; KLIMOV, I.Ya., redaktor; KRUCHININ,
V,I., redaktor; POLYAKOV, K.A., redaktor; SAGALAYEV, G.V.,
redaktor; AYZENSHTAT, I.I., redaktor; KORNEYEVA, V.I., tekh-
nicheskiy redaktor
[Electrolytic. metal coating for parts and articles for the
chemical industry] Elektroliticheskie metallicheskie pokry-
tiia detalei i izdelii v khimicheskoi promyshlennosti. Pod.
red. I.IA.Klinova, Moskva, Gos.nauchno-tekhn.izd-vo khimi-
cheskoi lit-ry, 1955. 54 p. (Korroziia v khimicheskikh prois-
vodstvakh i sposoby zashchity, no.2)   (MLRA 8:10)
          (Electroplating)

YEGOROV, I.A.; KRUCHININ, V.I., redaktor; LEVINSKIY, V.B., redaktor;
SHPAK, Ye.U., tekhnicheskiy redaktor

[Faolite and its use in the chemical industry] Faolit i ego prime-
nenie v khimicheskoi promyshlennosti. Pod red. V.I.Kruchinina.
Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 74 p.
(Korroziia v khimicheskikh proizvodstvakh i sposoby zashchity, no.6)
        (Plastics)
                                                    (MIRA 9:7)

SMIRNOV, V.K.; KATSNEL'SON, S.Kh.; KRUCHININ, V.I., redaktor; VEKSER, A.A., redaktor; SHPAK, Ye.G., tekhnicheskiy redaktor

[Chemical bases of "arzamit" coating and lacquers with cold hardening properties] Khimicheski stoikie zamazki arzamit i laki kholodnogo otverzhdeniia. Pod red. V.I. Kruchinina. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1957. 49 p.   (MLRA 10:5)
(Lacquers and lacquering) (Corrosion and anticorrosives)

SMIRNOV, L.A.; KANJALUZEN, A.V.; BAKLANOV, N.A., red.; VOLODIN, V.Ye., red.;
KISELEV, V.S., red.; ILINOV, I.Ya., red.; KRUCHININ, Y.L., red.;
SAGALAYEV, O.V., red.; UDYMA, P.G., red.; AYZENSHTAT, I.I., red.;
SHPAK, Ya.G., tekhn.red.

[Acidproof ceramic chemical apparatus] Khimicheskaia apparatura
iz kislotoupornoi keramiki. Pod red.N.A.Baklanova. Moskva, Gos.
nauchno-tekhn.izd-vo khim.lit-ry, 1957. 164 p. (Korroziia v khimi-
cheskikh proizvodstvakh i sposoby zashchity, no.10) (MIRA 10:12)
                    (Chemical apparatus)

SMIRNOV, V.K.; VOVSHINA, Ye.S.; KRUCHININ, V.I., red. [deceased];
     BELEN'KAYA, S.M., red.; KLEYMAN, L.G., tekhn.red.

     [Impregnated graphite and its use in chemical industry]
     Propitannyi grafit i ego primenenie v khimicheskoi pro-
     myshlennosti. Pod red. V.I.Kruchinina. Moskva, Gos.nauchno-
     tekhn.izd-vo khim.lit-ry, 1959. 67 p. (Korroziia v khimi-
     cheskikh proizvodstvakh i sposoby sashchity, no.12) (MIRA 12:7)
          (Graphite)   (Corrosion and anticorrosives)

BELETSKIY, F.A., dots., kand. fiz.-matem.nauk; BIRKUN, N.Ye., inzh.;
KAZANOV, V.A., inzh.; KLYUSHIN, S.M., dots.; KRUCHININ, V.L.,
inzh.; MARCHENKOV, Ya.P., dots.; PISKAREV, V.S., inzh.;
RUTSKIY, A.I., inzh.; SOKOLOV, N.M., dots., kand. tekhn. nauk;
SOLUYANOV, L.N., inzh.; SHKARBANOV, Petr Fedorovich, dots.,
kand. tekhn. nauk; PANOV, V., red.; LUKASHEVICH, V., tekhn.red.

[Handbook for electricians] Spravochnik elektrika. Saratov,
Saratovskoe knizhnoe izd-vo, 1963. 458 p.   (MIRA 17:1)

SKOBELEV, K.I.; KRUCHININ, V.P.

Suggestions deriving from the experience in the operation of rectifying junction systems for a.c. and d.c. currents. Elek. i tepl. tiaga 7 no.9:17-19 S '63. (MIRA 16:10)

1. Nachal'nik sluzhby elektrifikatsii i energeticheskogo khozyaystva Severo-Kavkazskoy dorogi (for Skobelev). 2. Zamestitel' nachal'nika Tuapsinskogo uchastka energoznabzheniya (for Kruchinin).

SKOBELEV, K.I. (Rostov-na-Donu; KHUCHININ, V.P. (Rostov-na-...)

Reliable performance of the inverter. Zhel. dor. transp. 47 no.3:
49-52 Mr '65.

(MIRA 18:5)

1. Nachal'nik sluzhby elektrifikatsii i energeticheskogo khozyaystva
Severo-Kavkazskoy dorogi (for Skobelev). 2. Zamestitel' nachal'nika
Tuapsinskogo uchastka energosnabzheniya Severo-Kavkazskoy dorogi
(for Kruchinin).

KRUCHININ, V.S.

Means for reducing the cumbrousness and cost of accounting for milled peat. Torf.prom. 34 no.1:16 '57.

(MLRA 10:2)

1. Direktor Rantsevskogo trofopredpriyatiya.
   (Peat industry--Accounting)

ZHARDINSKAYA, .N.G.; KRUCHININ, Yu.A.; SISKO, R.K.

Snowstorm at the height of the summer. Probl.Arkt. no.4:99-100
'58.

(New Siberian Islands--Snow)   (MIRA 11:12)

VORONOV, P.S., kand.geologo-mineral.nauk; KRUCHININ, Yu.A., mladshiy
nauchnyy sotrudnik

Brief physicogeographical characteristics of the region of the
Lazarev South Polar Station. Inform.biul.Sov.antark.eksp.
no.12:5-9 '59.   (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut geologii Arktiki (for
Voronov). 2. Arkticheskiy i antarkticheskiy nauchno-issledovatel'_
skiy institut (for Kruchinin).
     (Lazarev region, Antarctica--Physical geography)

KRUCHININ, Yu.A.

Work and life at the Lazarev Station. Inform.biul.Sov.antark.
eksp. no.14:35-36 '60.
            (Lazarev Station, Antarctica)   (MIRA 13:6)

KRUCHININ, Yu.A.

Ice ram, Inform. biul. Sov. antark eksp. no.20:52-53 '60.

(Lazarev region, Antarctica--Icebergs)   (MIRA 13:9)

KRUCHININ, Yu.A.

Ice foundation. Inform. biul. Sov. antark. eksp. no. 24:63-64
'60.
(Lazarev station, Antarctica—Ice)   (MIRA 14:5)

S/169/62/000/012/062/095
D228/D307

AUTHOR: Kruchinin, Yu.A.

TITLE: Preliminary results of scientific observations at
                 the Lazarev Antarctic station

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 57,
                 abstract 12J371 (In collection: Materialy po Arktike
                 i Antarktike, no. 1, L., 1961, 47-49)

TEXT: The meteorological conditions at Stn. Lazarev, situ-
ated on the Lazarev shelf glacier (69°58'2"S, 12°55'4"E), are out-
lined. Autumn (from mid-February to the beginning of May) is char-
acterized by the gradual drop of the average monthly temperatures
from -8, -10 to -13° and also by hurricanes. The average wind
velocity equals 21.3 m/sec; there are individual gusts of up to
60 m/sec. Gales (15-20 m/sec) and hurricanes (40-50 m/sec) are fre-
quent in winter (May-September), the average monthly September tem-
perature being -27.8°. Spring lasts from October 1 to November 10.
The air temperature rises to -16°, the average wind velocity equals

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Preliminary results ...   S/169/62/000/012/062/095
                                           D228/D307

11-18 m/sec, and hurricanes are rare. Quiet and clear weather, with
an average monthly temperature of -6.7° and a wind velocity of
7.7 m/sec, prevails in the summer. Judging from the thickness of
the yearly snow layers, the amount of precipitation is 200-350 mm
per annum. A study of the temperature variation in the surface
snow layer and in a well, 37 m in depth, shows that the thickness
of the active layer equals 14 m. Below this there is a 2-meter
layer of constant temperatures (-15.2°). Still deeper the tempera-
ture increases by 0.6° per meter.
/ Abstracter's note: Complete translation 7

Card 2/2

KOBLENTS, Ya.P.; KRUCHININ, Yu.A.

Dynamics of the shelf ice front in eastern Antarctica. Probl.
Arkt. i Antarkt. no.9:67-74 '61.   (MIRA 15:1)
                    (Antarctic regions—Ice)

S/169/62/000/004/049/103
D228/D302

AUTHOR: Kruchinin, Yu. A.

TITLE: Morphology of the shelf glacier in the vicinity of
               Station Lazarev

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 55, ab-
               stract 4V323 (Inform. byul. Sov. antarkt. ekspeditsii,
               no. 26, 1961, 9-12)

TEXT: The morphology of the station's immediate environs was stu-
died simultaneously with a visual survey of the part of the shelf
glacier on a scale of 1:50,000. A description is given of ice
banks, a glacial barrier, and the wavy surface to the south of the
station. The most unique topographic form -- ice fissures, probably
arising as a result of tangential internal stresses in the body of
the glacier and existing for a long time thanks to the activity of
wind, carrying snow away from the fissure bottoms -- is described
in detail. The number of fissures to the south of the station ex-
ceeds 30; their length varies from 10 to 500 m and their width from

Card 1/2

Morphology of the ...   S/169/62/000/004/049/103
                                          D228/D302

3 to 150 m; the height of the steep slope ranges from 1 to 22 m. 5
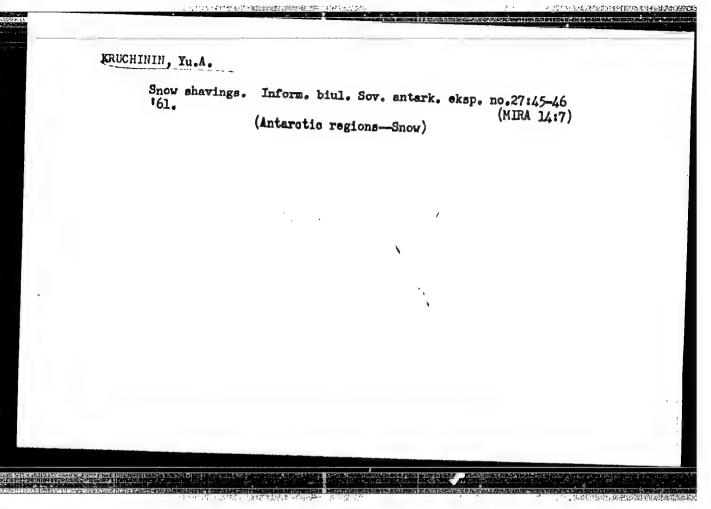references. /¯Abstracter's note: Complete translation._7

Card 2/2

KRUCHININ, Yu.A., mladsiy nauchnyy sotrudnik

Dnamics of the snow surface on lazarev Shelf Ice. Inform. biul.
Sov. antark. eksp. no.27:5-8 '61.
(MIRA 14:7)

1. Arktichoskiy i antarkticheskiy nauchno-issledovatel'skiy
institut.

(Lazarev Shelf Ice—Snow surveys)

KRUCHININ, Yu.A.

Snow shavings. Inform. biul. Sov. antark. eksp. no.27:45-46
'61.
              (MIRA 14:7)
        (Antarctic regions---Snow)

S/169/62/000/005/055/093
D228/D307

AUTHOR: Kruchinin, Yu. A.

TITLE: A "transparent" gale

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 31, ab-
               stract 5B214 (Inform. byul. Sov. antarkt. ekspeditsii,
               no. 28, 1961, 46-47)

TEXT: At the Lazarev Antarctic station the wind's strengthening is
usually accompanied by snow drifts and local snowstorms, and then
by general snowstorms. In contrast to this, the wind's strengthen-
ing to 20 m/sec, with gusts of up to 25 - 30 m/sec on July 3, 1959,
occurred under conditions of the complete absence of any snow mo-
vement; this is explained by the thin ice crust situated at that
time on the snow-cover's surface. It had been disturbed by the fol-
lowing morning, and the strong wind was, as usual, accompanied by
a severe snowstorm. /¯Abstracter's note: Complete translation._/

Card 1/1

S/169/62/000/004/059/103
D228/D302

AUTHORS: Voronov, P. S. and Kruchinin, Yu. A.

TITLE: The finding of marine sediments on the surface of
             the Lazarev shelf glacier

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 58, ab-
             stract 4V343 (Inform. byul. Sov. antarkt.ekspeditsii,
             no. 29, 1961, 22-26)

TEXT: The examination of one of the shelf glaciers near Stn. La-
zarev led to the discovery on the vertical surface of one of the
fissures in the glacier of shapeless dark spots with an area of
$200 - 300$ m^2; these consisted of disseminations of shingle, silt,
and some organic remains in the ice. The study of their composi-
tion indicates that traces of chemical weathering processes are
practically absent in these remains; and that bottom material
which belongs to the category of normal iceberg sediments, has
been found. The results of geologic and zoologic comparisons lead

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The finding of marine ...

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D228/D302

to the conclusion that recent marine sediments were encountered
on the surface of the Lazarev shelf glacier; it is noted that this
kind of discovery also applies to other places in Artarctica. There
is some doubt about the hypothesis, according to which the con-
tinuous movement of the mass of the ice layers forming the shelf
glacier takes place upwards at the expense of freezing below and
the intensive melting and sublimation of ice from the glacier's
upper surface, since no bedding is observed among the organic and
the terrigenous inclusions. The assumption is made that it is poss-
ible for such inclusions to be formed at the expense of the arti-
culation of a whole row of icebergs, some of which could have been
inverted. 7 references. /¯Abstracter's note: Complete translation.7

Card 2/2

S/169/62/000/004/058/103
D228/D302

AUTHOR: Kruchinin, Yu. A.

TITLE: Some data on the temperature regime of the Lazarev
              shelf glacier

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 58, ab-
              stract 4V342 (Inform. byul. Sov. antarkt. ekspeditsii,
              no. 30, 1961, 13-15)

TEXT: Observations on the temperature regime of the snow-firn
stratum in a hole that was melted through and drilled thermally
were organized during the execution of glaciologic work at Stn.
Lazarev in the period from June to December, 1959. The hole, with
a diameter of 6 cm and a depth of 37 m. was situated 10 km from the
base of the Lazarev shelf glacier. After melting the hole its na-
tural temperature was restored in 20 days. The measurements were
made by mercury inertia thermometers at the horizons: 2.5, 3.2, 5,
8, 10, 12, 14, 16, 20, 27, 32, and 37 m. Readings were taken in
five-day periods. It was established as a result of the observa-

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Some data on ...

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D228/D302

tions that the zone of seasonal temperature fluctuations stretches
to a depth of 14 m. The constant temperature observable at depths
of 14 – 16 m amounted to -15.2°. This agrees well with the mean
yearly air temperature. At greater depths the temperature rises
evenly with a gradient of 0.062° per meter, reaching -13.9° at a
depth of 37 m. The mean gradient, measured in a 100 m hole on the
Modheim glacier in 1950-1952, was about 0.014°. The anomaly which
is due to climatic warming and is almost absent on the temperature
curve of the Lazarev glacier, is well marked on the temperature
graph, constructed from these data. The rise of the temperature in
the shelf ice with depth is explained by the relatively high tem-
perature (-1.7°) of the water masses underlying the glacier; the
divergence with the data on Modheim is explained by the fact that
the anomaly has had time to be smoothed out during the 8 years,
and also by the accumulation of a 5 m stratum of snow on the La-
zarev shelf glacier in this period. /¯Abstracter's note: Complete
translation._7

Card 2/2

KRUCHININ, Yu.A., mladshiy nauchnyy sotrudnik

The ice situation in the region around Lazarev Station in 1959.
Inform.biul.Sov.antark.eksp. no.31:26-30 '61.   (MIRA 15:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
    (Lazarev region, Antarctica—Ice)

KRUCHININ, Yu. A., mladshiy nauchnyy sotrudnik

Study of the stratigraphy of the upper layers of the firn snow cover of the Lazarev Shelf Ice. Inform. biul. Sov. antark. eksp. no.32:19-24 '62.   (MIRA 16:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

(Lazarev Shelf Ice—Snow)

KRUCHININ, Yu.A., mladshiy nauchnyy sotrudnik

Microrelief of the snow cover of Lazarev Shelf Ice.
Inform. biul. Sov. antark. eksp. no.33:27-31 '62. (MIRA 16:2)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy
institut.

(Lazarev Shelf Ice--Snow)

KRUCHININ, Yu.A., mladshiy nauchnyy sotrudnik

Temperature conditions in the active layer of the snow formation
on the Lazarev Shelf Ice. Inform. biul. Sov. antark. eksp.
no.36:7-11 '62.   (MIRA 16:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy
institut.
          (Lazarev Shelf Ice—Snow)
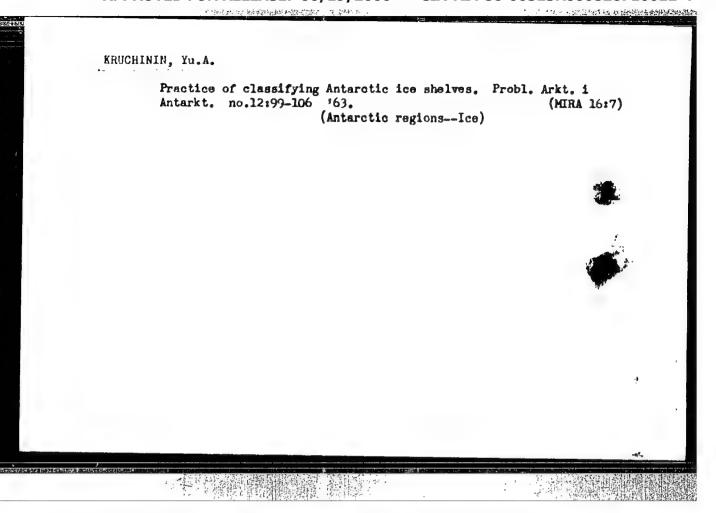
KRUCHININ, Yuriy Aleksandrovich; ANDREYEVA, L.S., red.; USANOVA,
          N.B., tekhn. red.

          [Trip into the ice age] Puteshestvie v lednikovyi period.
          Moskva, Izd-vo "Morskoi transport," 1963. 114 p.
                                                       (MIRA 16:7)
                  (Queen Maud Land)

KRUCHININ, Yu.A.

Practice of classifying Antarctic ice shelves. Probl. Arkt. i
Antarkt. no.12:99-106 '63.   (MIRA 16:7)
                    (Antarctic regions--Ice)

KRUCHININ, Yu.A., mladshiy nauchnyy sotrudnik; KOBLENTS, Ya.P., kand. tekhn.nauk

Dynamics of the Trolltung Shelf Ice. Inform.biul.Sov.antark.eksp. no.44:49-52 '63. (MIRA 17:4)

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AUTHOR: Kruchinin, Yu. D.   SOV/156-58-1-4o/46

TITLE: Dependence of the Mechanical Strength of Slags on Their
               Structure (O zavisimosti mekhanicheskoy prochnosti shlakov
               ot struktury)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya
               tekhnologiya, 1958, Nr 1, pp. 164 - 167 (USSR)

ABSTRACT: Blast-furnace slag has lately been more and more used for
               the production of various "stone" castings (kamennoye lit'ye).
               The dependence mentioned in the title has therefore gained not
               only theoretical but also practical significance. There is
               some disagreement of opinions represented in technical
               literature (Refs 1-3). The author has investigated the in-
               fluence of structure on the mechanical strength of castings
               made of blast-furnace slag from some metallurgical plants
               in the Ural Mountains. Under such conditions as occur in the
               production process of polygonal slag castings, i.e., at
               a comparatively low cooling rate of the melt, coarse-
               crystalline porphyritic structures are formed in which the
Card 1/4   porphyry phenocrysts are formed by the melilite mineral

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(Fig 1). The slag that was repeatedly molten in the ex-
periments was cooled more rapidly so that the castings ob-
tained showed dendritic structures consisting of melilite
skeleton crystals (Fig 2). These structures are of a greater
mechanical strength, as may be seen from table 1. Those
structures obtained at the same time that showed both of
the types mentioned take an intermediate position as regards
mechanical strength. With a longer crystallization time
of the castings showing dendritic structure, their mechanical
strength increases. This is due to the percentage of the
major constituent in the slag melilite (Table 2). An ana-
logous dependence was established in testing the slag for
compression and tension. Those samples of each of the two
structure types that showed particular strength were examined
petrographically in order to establish the influence of
crystal size upon the strength of the castings. The strength
was found to be higher for a smaller crystal size. Figure 3
shows the porphyritic structure of a sample where the prisma-
tic melilite crystals are small (up to 0,35 x 0,15 mm). The
Card 2/4   compression strength of this sample was high, being 2970

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        kg/sqcm. Figure 4 shows a dendritic structure of a laboratory
        sample taken from the same slag where the bulk of melilite
        skeleton crystals has up to 0,8 x 0,018 mm size. Its com-
        pression strength was 3700 kg/sqcm. There are 4 figures, 2 tables,
        and 3 references, 2 of which are Soviet.

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